

## CLAIMS

1 1. A method for processing a multidimensional array object  
2 comprising array objects, said method comprising the steps of:

3 managing flags for said multidimensional array object,  
4 said flags representing whether it is possible to optimize a  
5 process for elements of said multidimensional array object;  
6 and

7 executing a machine code corresponding to a state of said  
8 flags.

2. The method of claim 1, further comprising:

inverting said flags when a predetermined condition is no  
longer met.

3. The method of claim 2, wherein said predetermined  
condition is whether a base array of a multidimensional array  
object is allocated to consecutive memory areas.

4. The method of claim 2, wherein said machine code is either  
a machine code optimized or a machine code not optimized  
according to said predetermined condition.

5. The method of claim 2, further comprising:

determining whether said predetermined condition is met  
when writing to said multidimensional array object.

6. The method of claim 2 wherein, further comprising:

if said predetermined condition is met when generating  
said multidimensional array object, setting said flags to a  
generated multidimensional array object.

1 7. The method of claim 1 wherein, further comprising:  
2 if there is possibility of multi-thread processing of  
3 said multidimensional array object, generating a machine code  
4 for storing on a stack a dummy reference to said  
5 multidimensional array during execution of an optimization  
6 code.

1 8. A storage medium storing a program for a multidimensional  
2 array object comprising array objects, wherein said program,  
3 when read and executed by a computer, comprises steps of:  
4 managing flags for said multidimensional array object,  
5 said flags representing that it is possible to optimize a  
6 process for elements of said multidimensional array object;  
7 and  
8 executing a machine code corresponding to a state of said  
9 flags.

1 9. The storage medium of claim 8, further comprising:

2 inverting said flags when a predetermined condition is no  
3 longer met.

1 10. The storage medium of claim 9, wherein said predetermined  
2 condition is whether a base array of a multidimensional array  
3 object is allocated to consecutive memory areas.

1 11. The storage medium of claim 9, wherein said machine code  
2 is either a machine code optimized or a machine code not  
3 optimized according to said predetermined condition.

1 12. The storage medium of claim 9, further comprising:  
2 determining whether said predetermined condition is met  
3 when writing to said multidimensional array object.

1 13. The storage medium of claim 9, further comprising:  
2 if said predetermined condition is met when generating  
3 said multidimensional array object, setting said flags to a  
4 generated multidimensional array object.

1 14. The storage medium of claim 8 wherein, further  
2 comprising:  
3 if there is possibility of multi-thread processing of  
4 said multidimensional array object, generating a machine code  
5 for storing on a stack a dummy reference to said  
6 multidimensional array during execution of an optimization  
7 code.

1 15. A computer for processing a multidimensional array object  
2 comprising array objects, said computer comprising:

3 a central processing unit; and

4 a program, when read and executed by said central  
5 processing unit, comprises steps of:

6 managing flags for said multidimensional array object,  
7 said flags representing that it is possible to optimize a  
8 process for elements of said multidimensional array object,  
9 and

10 executing a machine code corresponding to a state of said  
11 flags.

1 16. The computer of claim 15, wherein said program further  
2 comprises:

3 inverting said flags when a predetermined condition is no  
4 longer met.

1 17. The computer of claim 16, wherein said predetermined  
2 condition is whether a base array of a multidimensional array  
3 object is allocated to consecutive memory areas.

1 18. The computer of claim 16, wherein said machine code is  
2 either a machine code optimized or a machine code not  
3 optimized according to said predetermined condition.

1 19. The computer of claim 16, wherein said program further  
2 comprises:

3 determining whether said predetermined condition is met  
4 when writing to said multidimensional array object.

5 20. The computer of claim 16, wherein said program further  
6 comprises:

7 if said predetermined condition is met when generating  
8 said multidimensional array object, setting said flags to a  
9 generated multidimensional array object.

10 21. The computer of claim 15 wherein, said program further  
11 comprises:

12 if there is possibility of multi-thread processing of  
13 said multidimensional array object, generating a machine code  
14 for storing on a stack a dummy reference to said  
15 multidimensional array during execution of an optimization  
16 code.